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(71) Applicant (for all designated States except US): **YEDA  
RESEARCH AND DEVELOPMENT CO. LTD** [IL/IL];  
Weizmann Institute of Science, P.O.Box 95, Israel, 76100  
Rehovot (IL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KOLLET, Orit**

[IL/IL]; 14 Ramat Chen St., 52232 Ramat Gan (IL).  
**LAPIDOT, Tsvee** [IL/IL]; 6 Boxer St., 74046 Ness Ziona  
(IL).

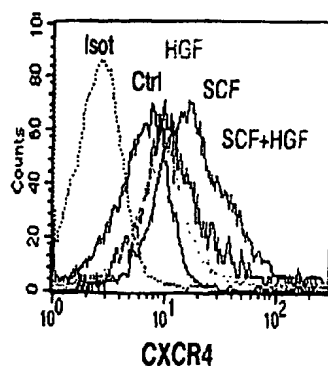
(74) Agent: **EINAV, Henry**; Inter-Lab Ltd., Science Based In-  
dustrial Park, Kiryat Weizmann, 76110 Ness Ziona (IL).

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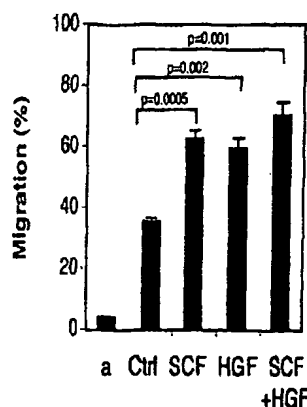
[Continued on next page]

(54) Title: **STEM CELLS HAVING INCREASED SENSITIVITY TO A CHEMOATTRACTANT AND METHODS OF GENER-  
ATING AND USING SAME**



A

(57) Abstract: The present invention relates to stem cells which exhibit increased sensitivity to a chemoattractant and, more particularly, to methods of generating and using them such as in clinical applications involving stem cell transplantation.



B

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Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IL2004/000315

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N5/06 C07K14/00 A61K38/19

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, PAJ, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 02/50263 A (IMP COLLEGE INNOVATIONS LTD; FORBES STUART (GB); THEMIS MIKE (GB); TH) 27 June 2002 (2002-06-27)</p> <p>page 3, line 10 - line 12 page 4, line 26 page 5, line 10 page 8, line 10 - line 11 page 19, line 9 - page 20, line 6 page 22, line 13 - line 22 page 32, line 8 - page 34, line 4</p> <p>----- -/--</p>	<p>1-3,5,8, 9,11-13, 15, 18-21, 23,26, 47, 50-52, 55,62, 66,69-71</p>

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
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- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- \*G\* document member of the same patent family

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European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3018

Authorized officer

Nichogiannopoulou, A

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IL2004/000315

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>EP 0 550 769 A (TORAY INDUSTRIES) 14 July 1993 (1993-07-14)</p> <p>page 3, line 52 - line 53; claims 1,4; examples 8,9</p>	<p>1-7, 11-13, 15-17, 19-21, 23-25, 27-30, 32,33, 62,63, 66-68, 71-74</p>
X	<p>NISHINO T ET AL: "HEPATOCTE GROWTH FACTOR AS A HEMATOPOIETIC REGULATOR" BLOOD, W.B. SAUNDERS, PHILADELPHIA, VA, US, vol. 85, no. 11, 1 June 1995 (1995-06-01), pages 3093-3100, XP000564571 ISSN: 0006-4971 page 3094, left-hand column, paragraph 2 - paragraph 3</p>	<p>1-3,5,8, 62,63, 66,69</p>
X	<p>US 5 968 501 A (COMOGLIO PAOLO) 19 October 1999 (1999-10-19)</p> <p>column 2, line 35 - line 59; examples 3,4,6</p>	<p>1-6, 19-21, 23-25, 27-30, 32, 62-67, 71,73,74</p>
P,X	<p>KOLLET ORIT ET AL: "HGF, SDF-1, and MMP-9 are involved in stress-induced human CD34+ stem cell recruitment to the liver." JOURNAL OF CLINICAL INVESTIGATION, vol. 112, no. 2, July 2003 (2003-07), pages 160-169, XP002289611 ISSN: 0021-9738 page 162, right-hand column, last paragraph; figure 5 page 166, left-hand column, line 4 - page 167, left-hand column, line 4</p>	<p>1-6, 62-67</p>
A	<p>PELED AMNON ET AL: "Dependence of human stem cell engraftment and repopulation of NOD/SCID mice on CXCR4" SCIENCE (WASHINGTON D C), vol. 283, no. 5403, 5 February 1999 (1999-02-05), pages 845-848, XP002289612 ISSN: 0036-8075 page 848, left-hand column, paragraph 2; figure 4</p>	<p>1-18, 36-46, 56-70</p>

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# INTERNATIONAL SEARCH REPORT

International Application No

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 00/06704 A (LAPIDOT TSVEE ; PELED AMNON            (IL); YEDA RES &amp; DEV (IL))            10 February 2000 (2000-02-10)            page 4, line 27 - line 33; claim 15            -----</p>	<p>1-18,            36-46,            56-70</p>

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IL2004/000315

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claims 11-18, 36-46 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-18, 36-46, 56-70

Methods of increasing the sensitivity of stem cells to a chemoattractant, relating to the use of hepatic growth factor (HGF).

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2. claims: 19-35, 71-74

Methods of treating a disorder requiring cell or tissue replacement by providing HGF.

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3. claims: 47-55

Stem cells and cell lines comprising nucleic acids encoding HGF.

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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IL2004/000315

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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